



## Plant different, eat different? Insights from participatory agricultural research

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### Abstract

We examine the link between agricultural production diversity and dietary diversity using data from a participatory agricultural research program in Malawi. Given the non-random selection into the program and possible simultaneity between production and consumption decisions, we use instrumental variables to examine the link. We also estimate average treatment effect on agricultural income and, considering the program's focus on maize and pulses, on household total and disaggregated food expenditure. Program participants have a more diverse (into pulses) and valuable production, relative to nonparticipants. Specifically, participants harvested about 2 more crops during the reference season and had an annualized food expenditure of about 37, 000 Malawian kwacha higher, both relative to non-participants. The increase in household food consumption came from carbohydrate (starchy) foods versus the diversified pulses that are rich in crucial micronutrients and have better (and higher) quality protein than other grains. While we observe an overall positive association between production diversity and dietary diversity, the effect of production diversity on dietary diversity does not vary by program participation status. These findings highlight that planting different and better quality (and high value) crops may not translate into better quality diets, at least in the immediate term. As such, production-oriented interventions may need to be accompanied by other efforts, such as nutritional education, to maximize their health benefits.

**Keywords:** production diversity, dietary diversity, propensity score matching, instrumental variables, Malawi

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